INVESTIGATION OF QUALITY PARAMETERS OF BIOLOGICALLY ACTIVE SUPPLEMENTS WITH BILBERRIES PRODUCED BY UKRAINE, RUSSIA AND BELARUS

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Introduction. Monitoring of the pharmaceutical market of Ukraine, Belarus and Russia showed the presence of such biologically active supplements containing bilberries as «Okovit» (Ukraine), «Ophthalmix» (Ukraine), «Chernika Forte» (Russia), «Chernika» (Belarus), «Chernika with lutein» (Belarus). These products are polycomponent – they contain vitamins A, C, E, microelements, in some cases, lutein. At the same time, they are monocomponent as regard to the content of phytocomponents – they contain only bilberry extract (12.5 mg, 20 mg or recalculated 2 mg of anthocyanins). The products are presented in two dosage forms such as capsules and tablets.

Aim. To determine the technological parameter «Uniformity of mass of single-dose preparations» and investigate the chemical composition of the specified biologically active supplements.

Materials and methods. The biologically active supplements containing bilberries mentioned above in 5 batches of each brand were purchased to carry out the work; number of units of single-dose preparations were not less than 50.

Uniformity of mass of single-dose preparations has been determined according to the requirements of SPhU. The quantitative content of the sum of flavonoids has been determined by the method of differential absorption spectrophotometry in the visible range of spectrum followed by the formation of the complex compound with $AlCl_3$ at the wavelength of 417 nm. The quantitative content of the sum of phenolic compounds has been carried out by the method of absorption spectrophotometry in the UV-range of spectrum at the wavelength of 270 nm.

Results and discussion. All investigated biologically active supplements satisfy the requirements of SPhU for tablets and capsules by the parameter «Uniformity of mass of single-dose preparations».

Optimal sample masses for tablets powder and capsules content have been grounded for quantitative determination of flavonoids and phenolic compounds.

The sum content of phenolic compounds in the investigated dietary supplements is within the range from 1 to 3 mg per tablet/capsule. The sum content of flavonoids is within the range from 0.5 to 2 mg per unit of single-dose preparation.

Conclusions. The study of technological and chemical quality parameters of biologically active supplements with bilberries produced by Ukraine, Russia and Belarus has been carried out.

DEVELOPMENT OF THE ISOLATION METHOD OF MELIPRAMINE FROM THE BIOLOGICAL MATERIAL USING CHLOROFORM

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Introduction. Melipramine (10,11-Dihydro-*N*,*N*-dimethyl-5H-dibenz[b,f]azepine-5-propanamine hydrochloride) is a tricyclic antidepressant. Cases of acute and lethal poisoning by melipramine has been registered. Its lipophilic property (Log P(octanol/pH 7.4) = 2.5, volume of distribution is from 10 to 20 l/kg) complicates the drug extraction from the biological material with hydrophilic solvents such as acidified water or acidified ethanol.

Aim. To develop of the isolation method of melipramine from the biological material using chloroform as a lipophilic extractant.

Materials and methods. The isolation method of melipramine from the biological material included the drug elution with chloroform from the liver tissue homogenized and dehydrogenated by